

What is claimed is:

1. A heat conduction system for a radiographic sensor device, comprising:

a heat sink formed of a thermally conductive material; and
a thermal channel device formed of a thermally conductive material, said thermal channel device comprising at least one elongated contact portion adapted to contact said radiographic sensor device and an extending member that extends away from said at least one contact portion and contacts said heat sink, wherein said thermal channel device extends between and substantially contacts said heat sink and said radiographic sensor device when said heat sink system is assembled, and wherein said thermal channel device conducts heat from said radiographic sensor device to said heat sink.

2. The heat conduction system of claim 1, further comprising a compressible thermal gasket positioned between said thermal channel device and said heat sink.

3. The heat conduction system of claim 1, wherein said at least one elongated contact portion comprises an elongate member extending substantially radially from said thermal channel device.

4. The heat conduction system of claim 1, wherein said at least one contact portion comprises an elongate member extending

substantially radially from said thermal channel device, with a top surface of said elongate member including a retaining stud.

5. The heat conduction system of claim 1, wherein said at least one contact portion comprises three elongate members extending substantially radially from said thermal channel device.

6. The heat conduction system of claim 1, wherein said extending member passes through a thermal channel aperture in an intervening circuit board positioned between said heat sink and said radiographic sensor device.

7. The heat conduction system of claim 1, wherein said extending member passes through a thermal channel aperture in an intervening circuit board positioned between said heat sink and said radiographic sensor device and wherein said extending member is substantially cylindrical and is adapted to receive a fastener capable of removably affixing said thermal channel device to said intervening circuit board.

8. The heat conduction system of claim 1, wherein said extending member passes through a thermal channel aperture in an intervening circuit board positioned between said heat sink and said radiographic sensor device and wherein said extending member is substantially cylindrical and includes a threaded outer

surface portion that is adapted to receive a threaded fastener capable of removably affixing said thermal channel device to said intervening circuit board.

9. The heat conduction system of claim 1, wherein an aperture in said thermal channel device is adapted to receive an elongate fastener capable of removably affixing said thermal channel device to said heat sink.

10. The heat conduction system of claim 1, wherein a threaded fastener aperture in said thermal channel device is adapted to receive a threaded elongate fastener capable of removably affixing said thermal channel device to said heat sink.

11. The heat conduction system of claim 1, wherein said thermal channel device maintains a substantially parallel planar orientation of said radiographic sensor device with respect to other radiographic sensor devices in a multi-sensor device array.

12. The heat conduction system of claim 1, wherein said thermal channel device is formed of a thermally conductive material having a different coefficient of thermal conductivity than said heat sink.

13. The heat conduction system of claim 1, wherein said thermal channel device is permanently attached or integrated into

the radiographic device.

14. A heat conduction system for a radiographic sensor device, comprising:

a heat sink formed of a thermally conductive material; and
a thermal channel device formed of a thermally conductive material, said thermal channel device being adapted to extend through a thermal channel aperture in an intervening circuit board positioned between said heat sink and said radiographic sensor device, with said intervening circuit board being held in a spaced-apart relation from both said heat sink and said radiographic sensor device by said thermal channel device, with said thermal channel device comprising at least one contact portion adapted to contact said radiographic sensor device and a substantially cylindrical extending member that extends away from said at least one contact portion and contacts said heat sink, with said substantially cylindrical extending member including a threaded outer surface portion adapted to receive a threaded fastener capable of removably affixing said thermal channel device to said intervening circuit board and with said substantially cylindrical extending member further including a threaded fastener aperture adapted to receive a threaded elongate fastener capable of removably affixing said thermal channel device to said heat sink, wherein said thermal channel device is designed to extend through said intervening circuit board and to extend between and substantially contact said heat sink and said

radiographic sensor device when said heat sink system is assembled, and wherein said thermal channel device conducts heat from said radiographic sensor device to said heat sink.

15. The heat conduction system of claim 14, wherein said at least one contact portion comprises an elongate member extending substantially radially from said thermal channel device.

16. The heat conduction system of claim 14, wherein said at least one contact portion comprises three elongate members extending substantially radially from said thermal channel device.

17. The heat conduction system of claim 14, wherein said thermal channel device is permanently attached or integrated into the radiographic device.

18. The heat conduction system of claim 14, wherein said thermal channel device maintains a substantially parallel planar orientation of said radiographic sensor device with respect to other radiographic sensor devices in a multi-sensor device array.

19. A method of conducting heat away from a radiographic sensor device, comprising the steps of:

providing a heat sink formed of a thermally conductive material;

providing a thermal channel device formed of a thermally conductive material and comprising at least one elongated contact portion adapted to contact said radiographic sensor and an extending member that extends away from said at least one contact portion; and

contacting said thermal channel device to said heat sink and to said radiographic sensor device, wherein said thermal channel device conducts heat from said radiographic sensor device to said heat sink and maintains said radiographic sensor device in a substantially parallel spaced-apart relation with said heat sink.

20. The method of claim 19, further comprising the step of removably affixing said thermal channel device to said heat sink.

21. The method of claim 19, further comprising the step of passing said thermal channel device through a thermal channel aperture in an intervening circuit board positioned in a substantially parallel spaced-apart relation between said radiographic sensor device and said heat sink.

22. The method of claim 19, further comprising the steps of:

passing said thermal channel device through a thermal channel aperture in an intervening circuit board positioned in a substantially parallel spaced-apart relation between said radiographic sensor device and said heat sink; and

removably affixing said thermal channel device to said intervening circuit board.

23. The heat conduction system of claim 19, wherein said thermal channel device is permanently attached or integrated into the radiographic device.